

REINFORCE YOUR DEFENSES WITH DACONIL ACTIONTM FUNGICIDE

Daconil ActionTM fungicide is a broad-spectrum fungicide and plant activator that controls 15 and suppresses two diseases. Daconil Action combines the unmatched dependability of Daconil[®] fungicide with the added benefit of acibenzolar-S-methyl (also known as acibenzolar). Unlike traditional methods of disease control, acibenzolar is not a fungicide — it has no direct effect against pathogenic fungi and bacteria.

 **Daconil Action**TM
Fungicide

syngenta[®]

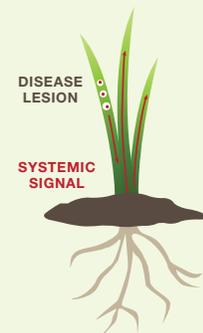
BOOST THE TURFGRASS IMMUNE SYSTEM WITH ACIBENZOLAR

According to the Fungicide Resistance Committee (FRAC), acibenzolar-S-methyl belongs to the product category called Host Plant Defense Induction (HPDI) in Group P. Acibenzolar is the only active ingredient in the HPDI category, recognized by FRAC code P and the only one registered in turf. This category, which bridges the gap between genetic resistance and conventional disease control, activates the plant's own defense genes via pathogenesis-related proteins (PR proteins) to mimic the natural systemic acquired resistance (SAR) response found in most plant species.

Upon application, Daconil Action adheres to the leaf surface and acibenzolar absorbs into the foliage. Once absorbed, acibenzolar stimulates the natural defense response of the turfgrass by activating the production of PR proteins.

PR proteins activated by acibenzolar increase the plant's natural ability to ward off disease. We call this response the "PR protein boost." This boost enhances turf health and awakens its resistance to biotic and abiotic stressors like drought to enhance overall turf quality, ultimately resulting in longer-lasting turfgrass protection.

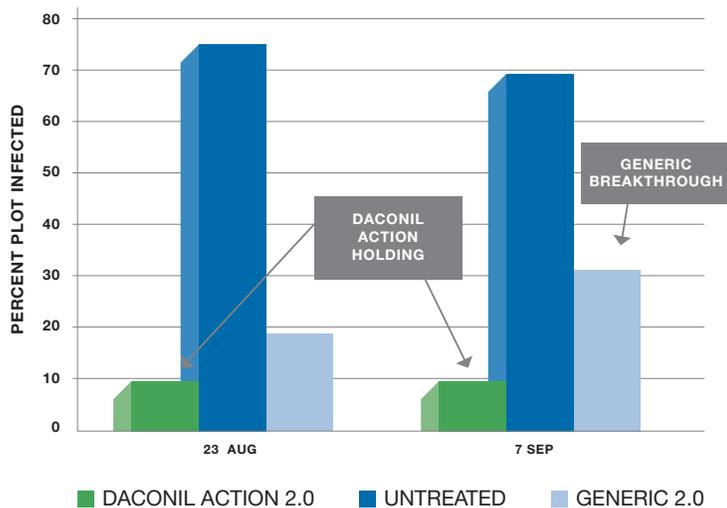
While chlorothalonil provides excellent protection as a multi-site fungicide on the plant surface, acibenzolar's highly systemic properties help achieve broad plant coverage. The end result is uniform distribution throughout the plant and superior systemic translocation to ensure natural defense activation for new growth.



1. ENHANCED DISEASE CONTROL

Daconil Action provides the same disease spectrum as the existing Daconil fungicide label with the added benefit of enhanced control for dollar spot and anthracnose. A new lower application rate of 1.6 fl oz/1,000 sq ft offers similar control of dollar spot on fairway-height turf* as 2.0 fl oz/1,000 sq ft of generic chlorothalonil.

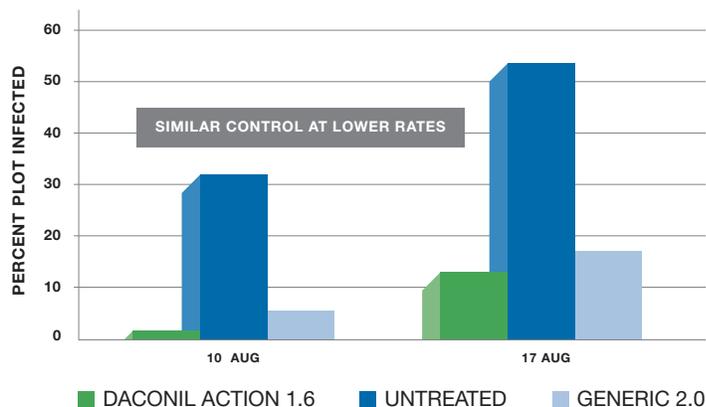
**HIGH DOLLAR SPOT PRESSURE
DACONIL ACTION 2.0 FL OZ VS. GENERIC 2.0 FL OZ**



DR. JOE VARGAS, MICHIGAN STATE UNIVERSITY—2011

Studies show Daconil Action at the 2.0 fl oz/1000 sq ft rate holds on a 14-day spray interval, while generic chlorothalonil at the same 2.0 fl oz/1000 sq ft rate had a breakthrough.

**LOW TO MODERATE DOLLAR SPOT PRESSURE
DACONIL ACTION 1.6 FL OZ VS. GENERIC 2.0 FL OZ**



DR. JOE VARGAS, MICHIGAN STATE UNIVERSITY—2011

Studies show 1.6 fl oz/1,000 sq ft of Daconil Action applied to fairway-height turf on a 14-day spray** interval controls dollar spot as effectively as a solo application of generic chlorothalonil at 2.0 fl oz/1,000 sq ft. With this rate, you will have the benefit of two additional applications of Daconil Action per season to control dollar spot on cool-season fairways, giving you an additional month of peace of mind over the course of the season.

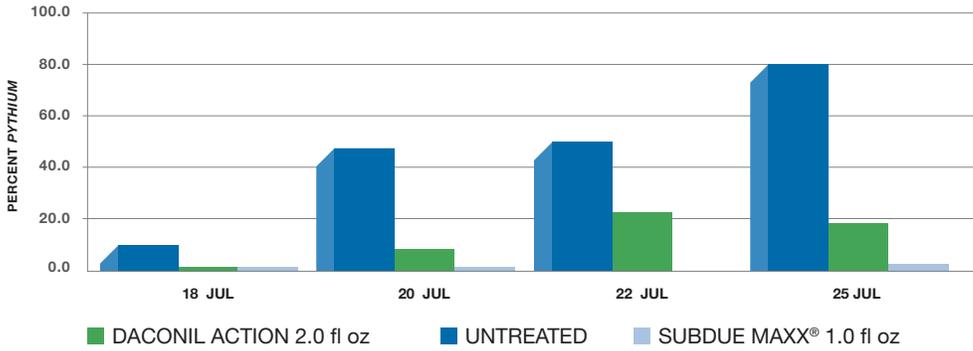
*In cases of low to moderate dollar spot disease pressure only.

**Syngenta supports a FIFRA Section 2(ee) recommendation for the use of Daconil Action fungicide to control dollar spot at the use rate of 1.6–2.0 fl oz per 1,000 sq ft on Group A Turf. Please see the Section 2(ee) recommendation to confirm that the recommendation is applicable in your state.

2. SUPPRESSION OF ADDITIONAL DISEASES

Chlorothalonil has no activity on *Pythium* blight and bacterial wilt. Acibenzolar has no direct effect against pathogenic fungi and bacteria. However, the PR proteins activated by acibenzolar increase in the plant's natural ability to suppress *Pythium* blight and bacterial wilt.

PYTHIUM BLIGHT

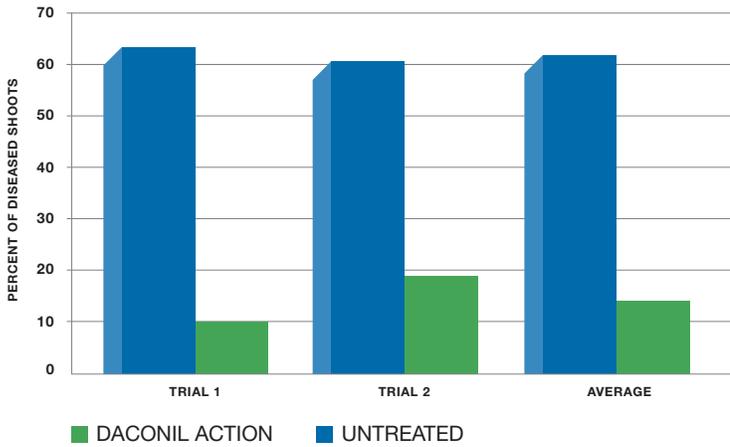


Treatments applied once. Inoculated with *Pythium aphanidermatum* the next day and rated for disease at 3, 5, 7 and 10 days post inoculation.

*Syngenta supports a FIFRA Section 2(ee) recommendation for the use of Daconil Action fungicide for suppression of *Pythium* blight and Bacterial Wilt on both Group A and Group B Turf as listed on the federal label. Please see the Section 2(ee) recommendations to confirm that the recommendations are applicable in your state.

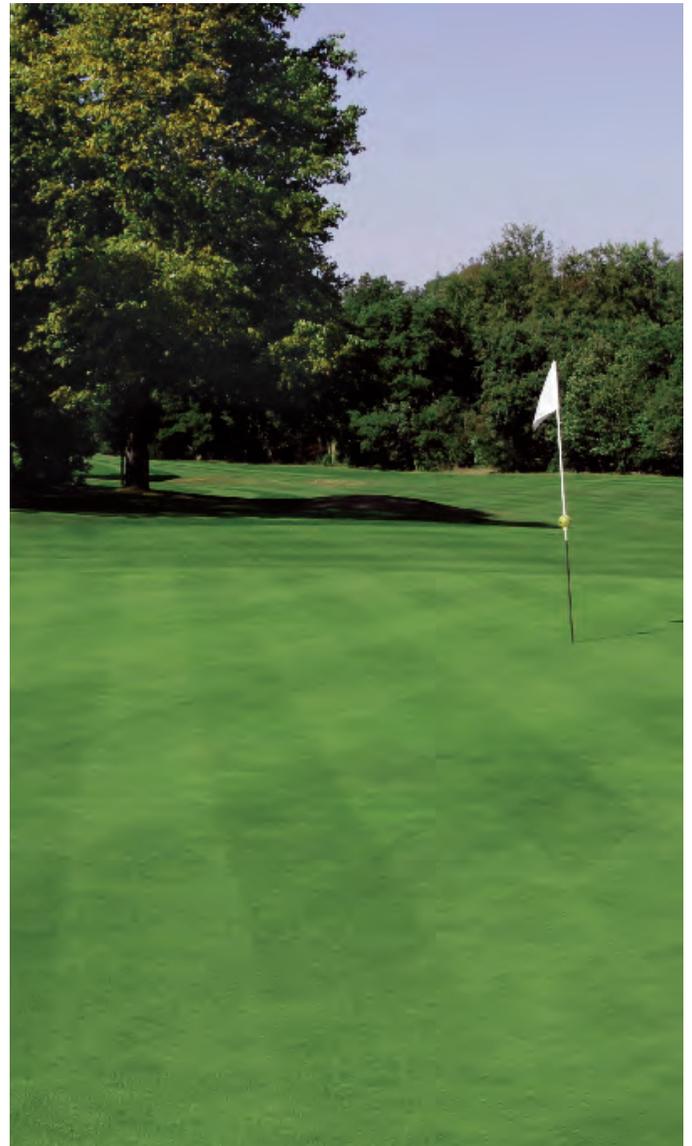
DR. JIM KERNS, UNIVERSITY OF WISCONSIN—2011

BACTERIAL WILT *ACIDOVORAX AVENAE* CREEPING BENTGRASS (A4) SHOWING SYMPTOMS



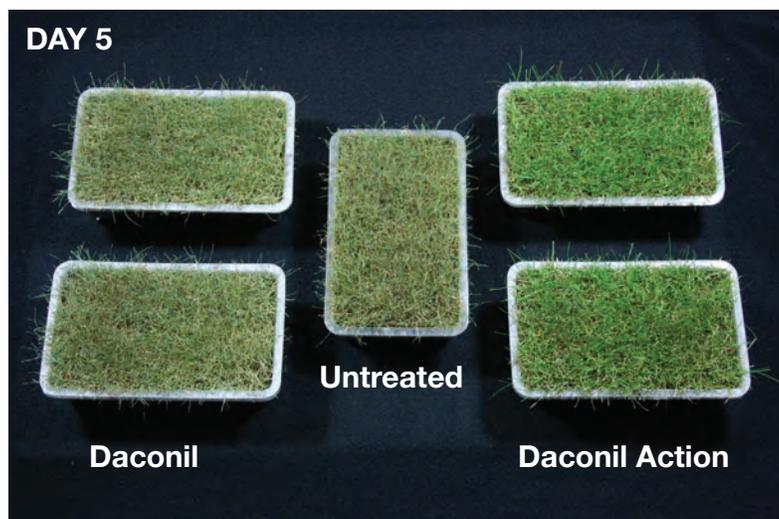
N. MITKOWSKI, UNIVERSITY OF RHODE ISLAND—2011

Percentage of A4 creeping bentgrass shoots demonstrating symptoms (and bacterial streaming) of infection by *Acidovorax avenae* when treated preventively, three days before bacterial inoculation (at 109 cfu/ml).



3. TURF HEALTH

Daconil Action helps increase the turfgrass plant's ability to withstand abiotic (environmental) and biotic stress tolerances like drought.



View a timelapse video of bentgrass plots treated with Daconil Action and Daconil fungicides versus an untreated control plot at <http://www.GreenCastOnline.com/Multimedia/sprayervideos.aspx>. The actual video can be found under the fungicide tab.

This test was conducted by Syngenta at their Research Biology Facility in Stein, Switzerland to evaluate drought stress.

